

Patent Claims

1. An arrangement for testing a power output stage, the power
5 output stage having at least three half-bridges which each
comprise a series circuit formed by an upper and a lower
semiconductor switch and to which the operating voltage is
applied, and the junction points of the semiconductor switches
10 of the half-bridges forming outputs which are connected to
windings of an at least three-phase motor, characterized in
that a control device (20) is provided, which switches
respectively one or respectively simultaneously a plurality of
the semiconductor switches (1 to 6) into the on state according
to a predetermined program and in the process tests whether the
15 respective voltages at the outputs (10, 11, 12) respectively
lie within a predetermined tolerance range for the respective
switching state.

2. The arrangement as claimed in claim 1, characterized in
20 that the feeds to the windings (13, 14, 15) can be interrupted
with the aid of further switches (31, 32).

3. The arrangement as claimed in claim 2, characterized in
that the windings (13, 14, 15) of the motor form a star
25 connection, and in that the further switches (32, 31) are
arranged at the star point and in the feed lines, from the
outputs to the windings (13, 14, 15).

4. The arrangement as claimed in either of claims 2 and 3, characterized in that the further switches (31, 32) are relays.

5. The arrangement as claimed in one of the preceding claims, characterized in that provision is made of connections of the outputs (10, 11, 12) of the half-bridges (7, 8, 9) and of the operating voltage to inputs of window comparators (20') via voltage dividers (22, 23, 24, 25).

6. The arrangement as claimed in one of the preceding claims, characterized in that means are provided which have the effect that when semiconductor switches (1 to 6) are not in the on state, the respective output voltage lies within the predetermined average tolerance range.

7. The arrangement as claimed in claim 6, characterized in that the means are formed by a resistor (26), which is located between the output (10) of one of the half-bridges (7, 8, 9) and the operating voltage source and generates together with the voltage divider (23) at the output (10) a voltage in the average tolerance range.

8. The arrangement as claimed in one of the preceding claims, characterized in that a controllable switch (17) is provided in the feed line of the operating voltage, a resistor (18) being connected in parallel with said controllable switch, and in that the controllable switch (17) can be controlled by the control device (20).